SOCIETY OF NORTH AMERICAN GOLDSMITHS

VOLUME II AUGUST 15, 1976 NUMBER 4

GOLDDUST

Dear Members:

I would like, at this time, to say thank you to Ms. Heidi Heifetz for her time and efforts on the office work of SNAG. Heidi has been working in the SNAG office for the last year. She was a full-time metal student at Boston University and on her off hours did much of the office work.

I had the pleasure of talking to her for three hours today. Her year of service was one she did with much enthusiasm and great desire to help SNAG move in a more mature direction. After her time in the office receiving mail, answering letters, and doing many of the nuts and bolts details she has a very clear picture of our strong and weak points, the great enthusiasm shown by all in the organization and the areas that need our attention.

It was in this area that Heidi outlined for me a list of things that need to be brought into better focus. Her last wish was to put together, with the help of other members, a new pamphlet to better define SNAG and its directions, benefits, and goals. This would be made available to whomever would ask for information on our organization. During the next two months Heidi will put this pamphlet together with the help of other members. She hopes to have this printed by October or November. SNAG is in great need of this pamphlet and clearer communication.

The other thing that I feel is coming about, and Heidi spoke on this subject, is geographical distribution of SNAG members on a map chart or our membership movements. In time maybe we should elect or appoint regional representatives (by population) who are in contact with the members in their area and also make a written report to the Newsletter of activities that have, or will be, taking place in that area.

There were other very fine suggestions that Heidi has made to the Board. When I asked her if she felt SNAG had a future, her answer was, "You should work in the office for a week and open the mail and do the paper work — yes, SNAG has a very promising future with the fine leadership each of its members can give their own organization."

We, the members of SNAG, want to say thank you Heidi Heifetz for your long hours and great help. With your concern and work support SNAG has grown in a more positive direction.

Bob Ebendorf
Rt. 1, Box 187x
Highland, N.Y., 12528

golddust policy

Published bi-monthly by the Society of North American Goldsmiths (SNAG), P.O. Box 247, University Station, Boston, Mass., 02215. Bob Evendorf, President; Joel Bagnal, Vice President; Arline Fisch, Secretary-Treasurer. Board members are: Hero Kielman, Tom Markusen, George McLean and Mary Ann Scherr. SNAG is a non-profit organization for educational, scientific, and aesthetic purposes, concerned with fostering, encouraging and teaching the subject of metalsmithing. SNAG is registered with the Internal Revenue Service Sec. 501 (c) (3). Subscription (per year) is automatic with student membership—$10, associate membership—$25, or full membership—$50-$100. Address all membership and advertising inquiries to Joel Bagnal, SNAG, P.O. Box 247, University Station, Boston, Mass., 02215. Address
(continued on page 2)

unsolicited material to the Editor, SNAG Newsletter, Art Dept., Longwood College, Farmville, Va., 23901. Material will be handled with care, but the Newsletter assumes no responsibility for it. Since many letters received are of interest to the entire membership, unless specifically stated to the contrary, all received letters risk possible inclusion in the Letters-to-the-Editor section.

Deadline dates for submitted material shall be 25 days prior to issue date. Projected issue dates are: October 1, December 1, February 1, etc. PLEASE NOTE: If you do not receive your Newsletter within 15 days of the issue date (and if you are a member) please immediately write to the Editor. This Newsletter was initiated through partial funding by a grant from the Crafts Program of the National Endowment for the Arts, to whom we are grateful for its continued support.

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Many people have requested back issues of the Newsletter. Since most back issues do not exist, Xerox copies will be forwarded upon request. Send 50 cents per copy (to cover duplicating and postage) to Mark Baldridge at Longwood College. If you desire copies to be mailed first class, include an additional 10 cents per copy. Do not send cash; send a check or money order made out to SNAG. Copies are bi-monthly from August 1, 1975.

snag news

1. Results of the balloting by full members determined that Robert Ebendorf shall remain President, Mary Lee Hu—Vice President, Joel Bagnal—Secretary-Treasurer. Membership Committee shall consist of Heikki Seppa, Glenda Arentzen, Phillip Fike, Kurt Matzdorf and Alma Eikerman Voting in favor of the amendment to the Constitution—45; against—3. Voting on options: 3 members for option 1, 14 for option 2, and 31 for option 3; therefore, dues are now student members—$10, associate members—$25, full members between $50-$100, depending on yearly income ($0-$10,999 is $50; $11,000-$15,999 is $75; $16,000 and up is $100). Full members ahall volunteer dues on an honor system. Joel Bagnal will soon be sending out the first quarterly statements.
2. A projected budget for the fiscal year was presented at the Cleveland Conference and it was decided that quarterly statements will be instituted from the Boston office. A CPA audit will be conducted on last year's expenditures and will be included with the first quarterly payment requests.
3. SNAG Conference — Seattle, Washington, will be the next major SNAG conference on June 16,17,18, 1977. Write John Marshall, Art Dept., University of Washington, Seattle, Wash., 98109, for further details.

exhibits

Pennsylvania—July 4-August 15, 10th Annual Juried Craft Show of the Central Pennsylvania Festival of the Arts will take place in the Penn State University Museum at University Park. It will be the festival's observance of the Bicentennial year, open to all craftsmen in the 13 original states.

Cooperstown, N.Y.—July 25-August 26, 41st National Arts and Crafts Exhibition. Juried, entry fee, awards. Write Cooperstown Art Assn., 22 Main St., Cooperstown, N.Y., 13326.

Richmond, Va.—November 12-14, "First Richmond Craft Fair" at Richmond Arena. Write Richmond Crafts Council.

Marietta, Ohio—November 7-December 4, "Marietta College Crafts National", $10 for 3 entries, juried, 25% commission, $5,000 in prizes, entry deadline is September 11 for slide entries, work must be shipped by October 31. Write MCCN, Marietta College, Marietta, Ohio, 45750.

San Francisco, Calif.—August 5-8, ACC Southwest Regional Crafts Fair, Fort Mason, Golden Gate Recreational Area. Contact Marcia Chamberlain, 4036 21st St., San Francisco, 94114.

Baltimore, Md.—February 17-20, 1977, Northeast Craft Fair Ltd. at Civic Center. Write NCF Ltd., 12 N. Chestnut, New Paltz, N.Y., 12561.

Shreveport, La.—54 Annual Juried Exhibition, November 14-December 5. Painting, graphics, and sculpture in all media are eligible. Fees, slides, and entry forms are due by August 6. For more information write Shreveport Art Guild, Friends of the Meadows Museum, Meadows Museum of Art, 2911 Centenary Blvd., Shreveport, La., 71104.

New Mexico, Clovis—New Mexico International Art Exhibit, October 3-16. Open to all artists. Media: all ptg., dwg., print. Cash awards, purchase awards of $1,000. Fee $5 per slide, no limit. Commission 10%. Entry cards, slides, fee due August 14. Work due September 27. Write New Mexico International, P.O. Box 153, Clovis, N.M., 88101.

Miami, Fla.—"Craft Work '76 American Crafts Council Southeast Region Exhibition" to be held November 12-December 12. Entrants may send two original works which have been completed within the last year. The pieces should not have won any previous awards. Only people with the A.C.C.S.E.R. (Ala., Fla., Ga., Ken., La., Miss., N.C., S.C., Tenn., Va., and W.Va.) may be eligible to enter. No limit on crafts media. Jury, awards, no sales, and fee. Final date for entry August 1. For more information write American Crafts Council, S.E.R.E., c/o Metropolitan Museum and Art Center, 7867 N. Kendall Dr., Miami, Fla., 33156.

METAL: A DISCOVERY THAT CHANGED THE WORLD

(courtesy of *The Last Two Million Years* published by the Reader's Digest Assn.)

FROM 6000 BC

Copper, bronze and iron, first used in western Asia, provided new, stronger tools; and a skilled class of smiths created the world's first industrial revolution

A process which was to have far-reaching consequences for the whole of mankind began among a group of craftsmen in western Asia somewhere around 8000 years ago. This was the discovery of metal-working, which was finally to bring man out of his long Stone Age. And like many of the great discoveries in man's history it may have come about accidentally, rather than by deliberate experiment.

As the inhabitants of the early farming villages had become more skilled in making various kinds of pottery and clay figures, they began to use a kiln, or oven, to fire their products. This provided the high-temperature, airless atmosphere needed for making hard pots with a clear, non-absorbent surface against which painted decorations stood out well. The potters also ventured further and further afield in search of special types of earth which could now be used for making pottery. They also searched for materials to make cosmetics.

In their search the prospectors also discovered the first metals: lumps of gold or copper in almost pure form, not needing refining, which could be beaten into shape like clay but had the advantage of being much less fragile. It was only a matter of time before someone, perhaps searching for a new type of colouring matter, placed lumps of metal into a pottery kiln to see what would happen to them.

The result was startling. Here were some strange coloured stones which, instead of keeping their basic form, like flint or obsidian, became liquid at high temperatures. When the kiln cooled, this liquid became solid again and took on the shape of whatever it had been resting on. This new substance was soft enough, especially when slightly heated, to be hammered into a thin sheet with a stone, and its edge could be ground down. Soon the early metalsmiths discovered that the same intense heat could be used to extract copper from metal-bearing ores of rock, by the process known as smelting.

The use of metal was first discovered in Iran and Turkey about 6000 BC. Six centuries later, the inhabitants of Catal Huyuk in southern Turkey, were smelting both copper and lead. They made small pendants, and also tubular beads, from thin copper sheets which were beaten flat with a hammer and then rolled. The earliest smiths, however, were slow to realize what a valuable discovery they had made, and treated the new material as a curiosity rather than a basis for progress. They went on using copper and gold for ornaments, but it was 2000 years before they used metal to make sophisticated tools or weapons. The breakthrough came about 4000 BC, when both in Iran and in southeastern Europe smiths began to make copper axes, some of them having a central hole to take a wooden shaft. These new tools must have been invaluable for forestry and mining.

The craft of metalworking was flourishing about 3000BC, in the early city-states of Mesopotamia. Better farming methods on the rich soil between the Tigris and Euphrates rivers provided the agricultural surplus to support craftsmen, and growing populations gave the craftsmen a larger market for their products. Soon the smiths experimented with mixing together different metals to produce alloys. By adding a small quantity of tin to copper they produced the first bronze—a harder metal than either, easier to cast than copper and giving knives and axes a sharper cutting edge. The smiths of Mesopotamia catered for several markets. They made personal ornaments, special ceremonial vessels, craftsman's tools, and weapons for warefare or hunting.

A search for rare metals

Knowledge of metal spread gradually through western Asia and Europe, but it was 2000 years before copper and bronze were in widespread use. Copper is fairly rare, and tin even more so; both would only be found by extensive searches. Probably the earliest metals were found where they were most accessible, on the beds of streams and rivers. Only after these resources were exhausted would man have worked out that the metal on the river beds must have been carried down by the river, and then sought out its source in remoter regions.

Mining was difficult and risky. The miners were

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in danger from roof falls and flodding, as well as from the foul atmosphere created by their method of mining; they lit fires to heat the metal-bearing rock, then threw on water to cool it suddenly, cracking the rock apart. The ore was broken into smaller pieces with crude stone hammers, and then shovelled on to wooden sledges to be taken for crushing, washing and smelting. The normal furnace was a large clay-lined hollow, packed with alternate layers of ore and charcoal, and raised to a temperature of over 1000 C. by a forced draught created by a skin bellows or blowpipe. The pure metal collected in a crucible at the base of the hollow; from there it was poured into a mold, usually made of stone or clay.

Soon, complex three-dimensional objects were being cast in molds, sometimes by the use of the *cire perdue,* or 'lost-wax' process. A wax model was encased in heat-resistant material, such as clay. The coated model was then heated, so that the wax ran out through small holes, after which metal was poured in to replace the wax. After the metal had cooled, the clay casing was removed, leaving a perfect metal replica of the original wax model. After casting, the object was re-heated, to toughen it. Any roughness left by the mold was removed by grinding, and a whetstone was used to sharpen the edges of tools and weapons.

New scope for the designer

The early metalworkers developed advanced techniques of fastening spear heads, arrow heads, and dagger blades in position. These included rivets, special loops for binding, hollow sockets to take wooden shafts, and punched holes for the insertion of tiny pegs.

The fact that metal will take any shape imposed on it by man was the whole beauty of the new discovery. In the Stone Age, whatever the flint-worker dreamed of, his achievements as a craftsman had been limited by the nature of his material. All he could do was to knock chips, large or small, off lumps of stone. But metalworkers were free, right from the start, to develop their own designs. Their skills, and not the properties of their material, were the only limitations on what they could produce; and skills were improving all the time.

Metal proved to posses another important advantage over stone. An axe-head or arrow-head of stone might be resharpened when it was broken or damaged, but it was quite likely to be discarded. A broken metal tool, on the other hand, could be melted down and used to make a new one, sometimes more advanced than the old. Thus, although mining was a laborious business, the metal won remained in use for a long time, and was only lost to society when finished products were deposited in treasure hoards such as those that accompanied a chieftain's burial.

New designs gradually developed: the farmer had a slim axe intead of the clumsy, easily broken stone axe with its narrow cutting edge and sometimes ill-fitting haft. He could now cut corn and hay with a sickle made in one piece, instead of a series of easily blunted flint teeth stuck individually in their hafting. The huntsman now had a specially designed spear, with a more secure fastening; the craftsmen had copper-tipped drills, chisels, punches, and awls.

The dominance of bronze

By about 2500 BC copper was in use over a region stretching from present-day Portugal and Denmark in the west to Pakistan in the east; in the Asiatic part of this area bronze was used as well. A thousand years alter, metal-workers in Europe had switched almost entirely to bronze, while in Asia Minor a revolutionary new metal, iron, was coming into use. Bronze, however, still remained the dominant metal in many regions, and it was the basis of the Aegean civilizations of the Minoans and the Mycenaeans. It was not until well after 500 BC that iron was in common use in northwest Europe.

In western Asia and around the eastern shores of the Aegean and the Mediterranean, the earliest smiths worked in towns and cities which had powerful centralized governments,commanding well-equipped armies and extensive civil service departments. Their leaders led worship in massive temples and palaces, and were laid to rest in monumental tombs.

In Europe, society was simpler; people were grouped in rural communities whose leaders were not remote, god-like figures glimpsed on the steps of a distant temple, but well-known individuals, often to be seen in the fields or around the farm. Nevertheless, they demanded symbols of their rank, like their counterparts in the east, if on a smaller scale. In life, they loved to display costly daggers in precision-made sheaths, and tunics decorated with sheet gold. It seemed only natural that the precious objects which had marked a man's rank in life should go with him beyond the grave. When a chieftain died, his grave

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was furnished with fine ornaments, and crowned by a large round burial mound of earth or stone. In some areas, such as Southern Russia and China, the servants of a chief were slaughtered when their master died, so that they might accompany him in the next world. The new metalworkers were often called on to produce rank-symbols of various types, which in turn helped to consolidate the positions of their chieftains.

Europe's earliest castles

Some of the earliest metal-using communities lived in fortified towns or fortresses. In about 2500 BC, in southern Spain and Portugal, for instance, some settlements were built on steep-sided spurs of rock, defended by one or even two high walls, with outlying fortresses to give warning of impending attack. The chieftain's stronghold, near the center of the settlement, was a great keep topped with turrets and fighting platforms, and the only entry was by a narrow passage.

The workshops of potters and coppersmiths were often clustered within the chieftain's courtyard for safety, but the ordinary townsmen lived in flimsy huts outside the high walls. These people fought primarily with bows and arrows — over 6000 arrowheads have been found in one castle keep, at Vila Nova deSao Pedro, near Lisbon — and tall bowers and bastions enabled them to fire down on enemies trying to scale the walls. To arm their defenders, the metalsmiths of the Spanish and Portuguese settlements made daggers and flat axe-heads.

These early metalsmiths also made tools such as chisels and saws. Using these tools, other craftsmen produced strange owl-eyed figurines in bone and stone, which were burried with the dead in stone tombs. Flintsmiths, who had for so long produced simple arrowheads and knives, now had to pit their skills against those of the new craftsmen in metal. They responsed by turning out beautifully worked flint daggers — not only in Spain, but in Italy, France, Denmark and southern England.

Beaker people on the move

Groups of people who knew how to work copper gradually moved into France, the Low Countries and the British Isles by 2000 BC, and took the secret of the new craft with them. These migrants were known as the Beaker people, after the bell-shaped pottery cups they made. These were bright red or buff drinking vessels, with attractive horizontal decorations, often in white paste, arranged in bands around the pot. The beakers are the first known pottery vessels which appear to be designed specifically for drinking.

The Beaker people may have originated either in central Europe or in Spain. By 1800 BC they had spread all over Europe to areas ranging from Portugal to Hungary and from Sardinia to the Shetland Isles. Wherever they went, their smiths sought copper to make daggers, axe-heads, and awls, while their womenfolk made neat woolen or linen clothes.

The newcomers had a dramatic impact on the peoples among whom they settled. They were skilled bowmen, able to fight for new territory; in Portugal they stormed the stone castles and took them over. In time they probably intermarried with subject populations. They crossed to Britain from the European mainland in several phases, and paved the way for the emergence of the well-organized rural kingdoms which were to erect monuments such as Stonehenge and attract skilled craftsmen from all over north-western Europe.

Battle-axes and buttons

By about 1500 BC many skilled craftsmen were at the service of local rulers in the areas that were later to become southern England, Brittany, Ireland, Czechoslovakia and Germany. By then, the secret of bronze had spread from Asia Minor through central Europe to the west, and craftsmen made fine bronze daggers, which had wooden hilts studded with bronze rivets or tiny gold nails, and pommels of bone or amber. The daggers had sheaths of leather or basket-work, sometimes bound with metal strips and lined with cloth. The chiefs went into battle swinging bronze halberds.

Central Europeans fastened their cloaks by great bronze pins with elaborate ornamental heads. The British preferred buttons, and richer men could now afford to have these capped in gold. In southern England, clothing was sometimes decorated by sewing on to it a flat gold plate bearing a geometric pattern of fine lines. There were necklaces of amber, shale or faience beads. Amber is the fossilized resin of pine trees of long-submerged forests, washed ashore round the Baltic coast. Faience is a blue-green glassy paste which originated in western Asia, but by this time there were several European centers of manufacture.

Bronze-workers made axe-heads, useful both as tools and weapons, and bronze awls, which helped the leather worker. But most of the products of the

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new metal technology seem to have been useful mainly as symbols of status, designed to impress subject peoples with the wealth and power of their owners. Goldsmiths in Ireland made lunulae, which were collars of sheet gold. Chiefs in southern England drank from cups of amber, shale or even pure gold. And the respect accorded to a barbarian ruler did not end with his death, for his subjects had to labor to erect his burial mound. The rows of mounds within sight of Stonehenge are clear indications of the status of the chiefs buried beneath them. Probably society was rigidly stratified, each person's rank being determined by birth rather than by merit or achievement; not only rulers but rich, high-born women and children also were frequently given ceremonial burial.

Craftsmen on the move

One person who could rise in this type of society was the independent craftsman, whose skill was so rara and valuable that he could move from one employer to another at will. Some craftsmen were content to stay within one chief's household, working with materials as diverse in origin and character as gold, bone, wood, leather, bronze, shale, amber and stone. But other smiths travelled to seek new markets; the early Irish metal-workers, for instance, brought their products to England and France, and crossed the Channel to reach the courts and markets of central Germany.

The itinerant metal-workers travelled along well established routes, sometimes concealing their stock-intrade in holes in the ground. Some were prevented from returning, and the hoards have survived to be ploughed up in modern times. In Germany, at the junction of the rivers Saale and Elster, no fewer than 750 bronze axe-heads have been discovered in different hoards. Some smiths crossed the Alps into northern Italy; and Hungarians sometimes worked in Denmark.

All this traveling helped to spread new techniques very quickly. Analysis of the copper halberds found in central Germany and in Ireland shows that smiths in both regions knew that it was better to use a hard copper, containing arsenic, for the blades, but that the rivets had to be made of a softer copper. Probably one group discovered this and spread the knowledge on to others.

The introduction of metal tools made possible a greatly improved form of one of man's earlier inventions — the wheel. The wheel was originally developed in western Asia, though it is uncertain how it was invented. Probably the germ of the idea came when some unknown genius, watching men hauling a laden sledge along the ground, frist thought of placing segments of tree trunk under the sledge to roll it over the ground. By about 3250 BC wheeled carts were being used in Mesopotamia and the Caucasus; they had solid wooden wheels made in three parts and strapped together...

books

Marietta College Crafts Directory-USA, by Marietta College. The directory is comprised of listings of artists/crafts persons in alphabetical order, media within state, and crafts organizations. Edition 1 is priced at $11.00 per copy, and is only available by mail. Write MCCD-USA, Marietta College, Box DM, Marietta, Ohio, 45750.

Contemporary Jewelry Second Edition, by Philip Morton. The tools, materials, processes, newest techniques of handcraft jewelry, and the aesthetics of jewelry are included in the new, revised edition. The book includes more than 600 illustrations and 18 full-color plates. For more information write Holt, Rinehart and Winston, 383 Madison Ave., N.Y., N.Y., 10017.

518708. *American and European Jewelry 1830-1914.* C. Gere. orig. $14.95, now $7.98.

517477. *Pewter In America: Its Makers And Their Marks.* Vol. 3. L.I. Laughlin. orig. $32.50, now $19.95.

106795. *Collecting American 19th Century Silver.* K. M. McClinton. orig. $12.50, now $3.98.

119625. *The Pleasure of Jewelry and Gemstones.* Dr. J. Sataloff. Import only $5.98.

097397. *Modern Silver.* Graham Hughes. orig. $12.50, now $4.98.

149788. *National Types of Old Pewter.* H. H. Cottrell, A. Riff and R. M. Vetter. orig. $13.95, now $3.98.

066572. *Peter Carl Faberge Goldsmith and Jeweler to the Russian Imperial Court.* Henry Charles Bainbridge. orig. $30.00, now $9.98.

(Write: Publishers Central Bureau, Dept. 437, 1 Champion Ave., Avenel, N.J., 07131. Include proper numbers, cost, add $1.50 shipping and handling cost, plus N.Y. and N.J. residents include sales tax.)

THE 'CALIFORNIA RIP-OFF'

An ad in the Los Angeles Times on May 20 offers a substantial reward for the return of jewelry and objects stolen from the California Design '76 Exhibition at the Pacific Design Center on April 26 (call Bill, 213/988-8833).

Apparently on the Monday night of the last week of the show, the cases were opened and almost all of the metal-jewelry pieces were stolen.

While this event is truly unfortunate, hopefully it will insure that metalsmiths will be much more careful of their work in the future. Security should not be taken for granted.

corrections

1. In June 1976 issue, under Films & Slides, the issue indicates that *Art in Miniature* is available from Audience Planners, NYC. "I wrote to Audience Planners to order this film and they wrote back that this film is not theirs."—Edward Higgins
2. We omitted the photographer of last issue's SNAG exhibition stand. The photographer was Bernard Bernstein.

workshops

1. Reston, Va.—Dec. 3,4,5 have been selected for the Reston Fine Arts Fair. Any artist or craftsperson residing in the USA or Canada is eligible for space consideration, by jury, provided that their work is original and not in any way, shape or form kit affiliated. Application deadline: July 30. For additional information, write Reston Fine Arts Fair, 1000 Century Plaza, Suite 301, Columbia, Md., 21044.
2. Peters Valley, Layton, N.J.—Jewelry designing with enamel in mind by Harold Helwig. Will be held Sunday, Oct. 3. For further information, write Peters Valley Craftsmen, Layton, N.J., 07851.
3. Arline Fisch will conduct a workshop "Weaving Techniques in Metal" Aug. 9-11, at the Nova Scotia College of Art & Design, 5163 Duke St., Halifax, Nova Scotia.
4. Dunconor Workshops shall offer the following summer workshops: Designing for Jewelry, Aug. 9-13 [$70]; Metals Symposium, Aug. 16-28 [$185]. Registration must be received immediately. Enclose $10 registration fee with a deposit of $50 for each desired workshop to Dunconor Workshops, Box 2000, Crested Butte, Colo., 81224.
5. Deer Isle, Maine—Haystack 76. A series of five sessions has been planned for the '76 summer, ending on Sept. 24 at Haystack Mountain School of Crafts. Charges per person for tuition, room and board are $150 per week for twin bedroom accommodations. The day rate is $60 per week to include luncheon and instruction. Those sessions concerning jewelry will be held Aug. 15 thru Sept. 3—Production Workshop, Jewelry (George McLean); Sept. 12-24—Production Workshop, Jewelry (Miye Matsukata).
6. Penland, N.C.—Listed below are workshops that will be held from May 31-Sept. 17 at the Penland School of Crafts. Fees include registration ($60); room & board ($77/week per person, double room with twin beds. Non-resident students' application fee is $15, payable with the application, not refundable. The registration fee for all other students is $60, not refundable and payable with application. Materials, firing charges, and glass blowing fees are charged all other students. Workshops are: Aug. 9-27—Enameling by Bill Helwig, Jewelry by Gary Noffke; Aug. 30-Sept. 17—Enameling by Mel Someroski, Jewelry by George Van Duinwyk. (For further information, write Registrar, Penland School of Crafts, Penland, N.C., 28766. 704/765-2359.)
7. Gatlinburg, Tenn.—Workshops will be held this summer at Arrowmont School of Crafts. You may receive graduate, undergraduate credit, or non-credit through the U. of Tenn. A high school diploma is required in order to receive undergraduate credit. Fees include Arrowmont registration fee (non-refundable) $15; U. of Tenn. application fee $10, tuition $70 per week, double room $90 per week. Workshops and dates are: Aug. 2-13—Beg. & Adv. Jewelry by Caldwell. (For more information, write Arrowmont School of Crafts, Box 567, Gatlinburg, Tenn., 37738. 615/436-5860.)

conferences

1. Winston-Salem, N.C.—The ACC National Conference will be held from June 6-12, 1977.
2. Many members of SNAG interested in working malleable iron and tool steel would benefit by participation in the activities of ABANA, the *Artist Blacksmith Association of North America.* ABANA will have its 1976 conference on Oct. 13,14,15,16, at Carbondale, Ill., in collaboration with Southern Illinois Univ.

As an organization ABANA is about 4 years old and now has 175 members who represent many types of metalsmiths, older and younger, professional and non-professional. The conference programs are always informative with specialists demonstrating techniques and skills valuable to both the inexperienced and advanced metalsmith. This year's program will include Harvey Yellin of the Yellin Metalworkers, Philadelphia; Harold Peterson, who is a weapons specialist concerned with the Revolutionary and Civil War periods; Frank Turley, who operates a blacksmithing and ferriers school in Santa Fe, New Mexico. Slim Spurling, out of Skunk Hollow Forge, Morrison, Colo., will give one lecture and a 3-day ongoing demonstration in the use of the power hammer; Albert Paley is going to lecture on the design and construction of his Renwick Gates and Chattanooga Fence; Cyril Smith, of the Massachusetts Institute of Technology will lecture on Damascus Steel and the development of iron technology. Francis Whitaker of the Mountain Forge, Aspen, Colo., will demonstrate cold joining techniques and free hand scroll work. The SIU Research team graduate students of Brent Kington, namely Daryl Meier, Bob Griffith and Jim Wallace, will deliver two demonstrations and lectures on Damascus steel manufacturers.

There will be an extensive gallery exhibit of recent work plus items from museums and private collections. Slides, films, auxiliary exhibits and access to workshop forging. Meals and lodging will be available through Southern Illinois University's facilities at their Enviornmental Center on Little Grassy Lake (the site for all demonstrations), which includes 12 hots meals and 4 nights lodging for $48, dorm

style. You can also live buckskinner's style at a nearby campground at $2.50 per day. The conference fee is $35. Send your application, with a $15 deposit, to Daryl Meier, Conference Coordinator, University Museum and Art Gallery, Home Economics Bldg., Southern Illinois University, Carbondale, Ill., 62901.

3. November 11-14, ACC Southeast Regional Assembly and Workshop in Miami, Fla. Contact Margaret Pelton, Art Dept., Miami-Dade Community College, South Campus, Miami, Fla., 33156.

opportunities

1. The National Park Service has announced a "Crafts-in-the-Parks" grant for 1977, to be administered by Peters Valley Craftsmen. Eight craftspeople will be awarded $1,000 each, jury selected. Final collection will go on exhibition in Peters Valley during the summer of 1977 and then travel throughout the U.S. For further information and application, please write Peters Valley Craftsmen, Layton, N.J., 07851, or call 201/948-5200.

2. Ronald Hayes Pearson, Inc., Craftsman in Metal. In our workshop we have set aside two bench spaces that are not directly related to our present eight-person production shop. One of these work areas will be made available to an established craftsman/teacher and the other to a local high school student. Neither person would be considered a potential employee nor would they be required to contribute to our production program. We can offer, in addition to bench space, the use of a reasonably well-equipped metal production shop, participation in a professional situation, a sharing of experiences, instruction as desired, and a beautiful location. In return we would like to share in the knowledge, skills and vitality of the persons involved. A stimulating and beneficial experience is likely to occur.

J. Fred Woell has been participating on these terms for nearly two years. The sharing has been tremendously important to all involved, and as a direct result of the association, we now plan with his departure this August, to develop the program described on a permanent basis. The inclusion of a high school student is an attempt to contribute to a need, often existing in rural areas, for opportunities that allow an individual to explore an interest in the arts.

The craftsman may participate in our workshop situation for any part of a school year (Oct. thru May). The individual would be responsible for development of the work program and would provide for his/her own support and living arrangements. We can help, of course, in locating a suitable housing facility.

Anyone interested in making use of this bench space may contact me. Please include references, biography, photographs, information regarding skills and work experiences, and an outline of what would be accomplished if given this opportunity. (Ronald Pearson, Old Ferry Rd., Deer Isle, Maine, 04627.)

Wide variety of inexpensive jewelry in smoky quartz, poika shells, black coral, turquoise and jade; chains in gold or silver. Write Sungem, 900 W. Los Vallecitos, San Marcos, Calif., 92069.

films & slides

†† Jewelry: Working in White Metal, 6FS filmstrip is available for $42. Jewelry: Replicas and Reproductions, 4FS filmstrip is available for $28. Write Visual Aids Studio, 2121 Normal Park, Box 1759, Huntsville, Texas, 77340, for 30-day approval.

†† Jim Meyer, SNAG Slide Curator, has a few slide kits available of SNAG members. The number of slides per kit varies from approximately 5-15. Terms of rental vary with membership. There will be no charge for full members and only a nominal cost (to cover duplicating and postage) for associate members. Write for further details to Jim Meyer, 11713 S. Briarpatch, Midlothian, Va., 23113.

†† In October 1975, the Eastern Michigan University Art Dept., with the support of the Michigan Council for the Arts, held a national invitational exhibition for jewelers and metalsmiths entitled "Uncommon Smiths of America". At the conclusion of the exhibit we photographed the works for a permanent record. A few months ago we offered for sale two sets of slides from the exhibit; we have had many responses since our first offer. To insure that all interested parties have an opportunity to obtain them, we are making the sets available again: U.S.A. I — 106 slides; U.S.A. II — 48 slides. For order forms, address inquires (by Sept. 10) to: Slides—"Uncommon Smiths", E.M.U. Art Dept., Attn. Fred Hunter, 118 Sill Hall, Ypsilanti, Mich., 48197.

members' activities

Stephen Albair was a visiting instructor July 5-28 at the Nova Scotia College of Art and Design, 5163 Duke St., Halifax, Nova Scotia. His topic was "Casting Techniques".

Joel Bagnal has received a full NEA grant this year.

James Bennett has left Bradley University in Peoria, Ill., and taken a position at Memphis Art Academy. Jim Melinda left Mohave Jr. College in Arizona to replace Bennett at Bradley.

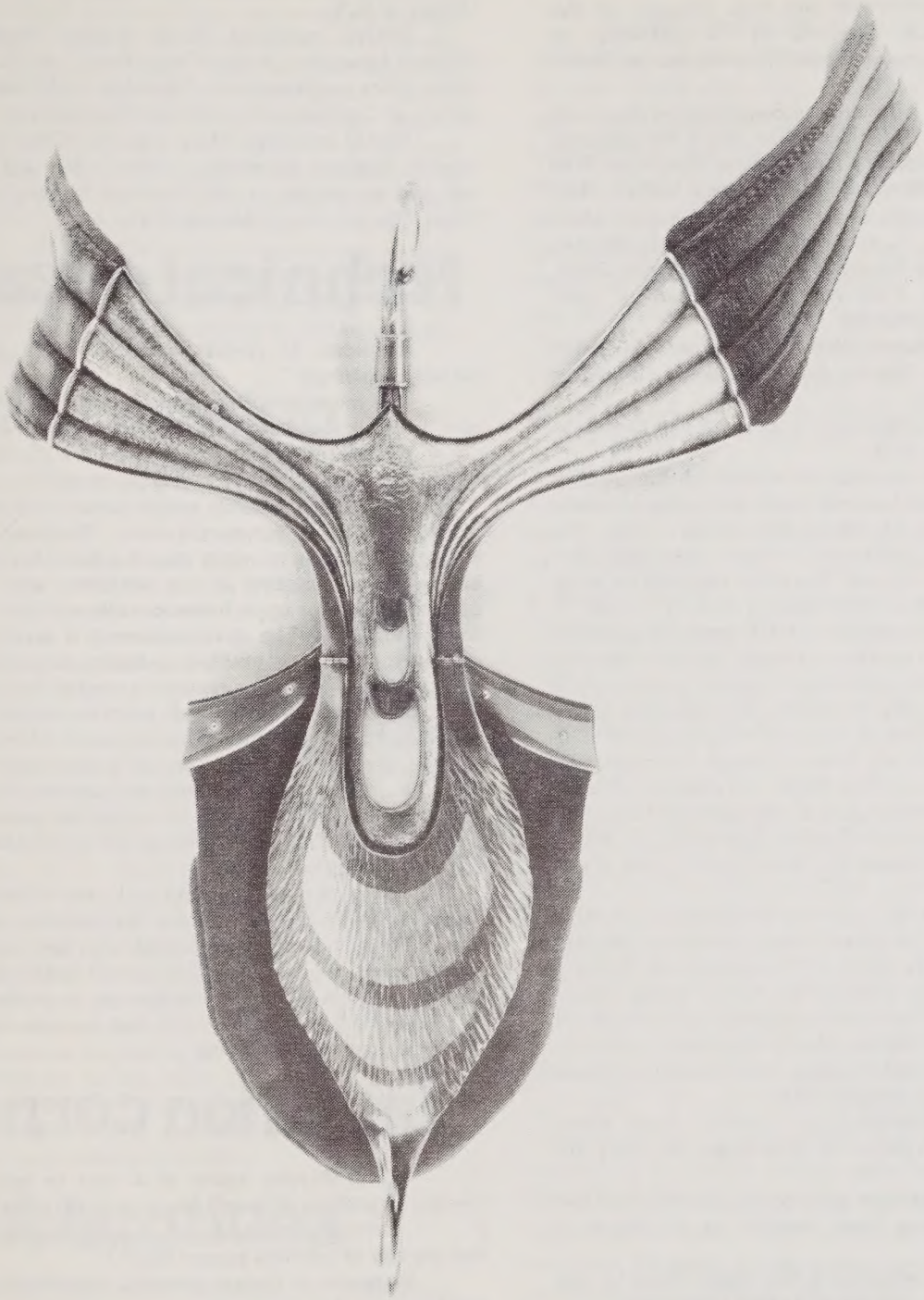
Steven Brixner will be the metalsmith-in-residence at Penland School of Crafts (N.C.) for the upcoming year.

Jaclyn Davidson had a one-man exhibit at the Aaron Faber Gallery in N.Y. during June.

Chuck Evans was one of 14 "Merit Award" winners in the national "Intent: Jewelry/Metals" at Edenboro State College, Pa. He also received a "Purchase Award" at this month's "58th Annual Toledo Area Artists Exhibition", in Ohio. At the "Midwest Crafts Festival" (Ill.) he received one of four "Awards of Excellence". He has three pieces in the forthcoming exhibition "American Metal Works 1976", at the Sheldon Memorial Gallery of the U. of Nebraska-Lincoln. He gave a one-day workshop (June 24) at thy U. of Akron on woven chains. Also, he taught at Peters Valley Crafts School, Layton, N.J. June 28-July 9.

Arline Fisch will conduct a workshop "Weaving Techniques in Metal" Aug. 9-11, at the Nova Scotia College of Art & Design, Halifax, Nova Scotia.

(con't.)



MARCIA LEWIS; holster purse, 1"x7"x13" (excluding belt);

sterling silver, brass, resin, leather [photos by Dennis Dooley, Janesville, Wisconsin]

Don Johnson participated in a one-man show at SUNY College at Oswego, N.Y. in March.

Orland Larson, goldsmith and N.S. Director of the Canadian Crafts Council, was one of 10 craftsmen on Canada's official delegation to the WCC Conference in Oaxtepec, Mexico June 6-13.

Stanley Lechtzin is hosting two electroforming workshops at Temple U. and Tyler School of Art in Philadelphia. SNAG participants include Joel Bagnal, Mark Baldridge, Fred Fenster, Arline Fish, William Harper, Richard Helzer, Hero Kielman, Thomas Markusen, John C. Marshall, Kurt J. Matzdorf, Richard Mawdsley, C. James Meyer, Robert E. Mitchel, Eleanor Moty, Mary Ann Scherr, Heikki Seppa, Helen Shirk, John Loren Wescott, J. Fred Woell, Bob Browning, Gary Griffin and Jem Freyaldenhoven.

Marcia Lewis received a $5,000 NEA grant. Marcia has accepted a position at Cabrillo College, teaching alongside Lynda Watson for the fall.

Susan Lloyd participated in a show at the Evolution Gallery in Boston during July.

Philip Morton has created the second edition of *Contemporary Jewelry*, which includes tools, materials, processes and newest techniques of handcraft jewelry. Also, the aesthetics of jewelry — presented in more than 600 illustrations and 18 full-color plates. For more information write Holt, Rinehart and Winston, 383 Madison Ave., N.Y., 10017.

Eleanor Moty has received a NEA grant along with a U. of Wisconsin grant to continue research and development of her work. Mary Lee Hu has taken Eleanor's position at U. of Wisconsin during her leave of absence. Also, Eleanor gave a lecture "An Aesthetic View of Metalsmithing in America" at the Museum of Contemporary Arts in Chicago in conjunction with the show "American Crafts 1976—An Aesthetic View". Eleanor's work was exhibited as was the work of Mary Ann Scherr, Al Paley, Bob Ebendorf, Mary Lee Hu, J. P. Miller, Arlene Fisch, Richard Mawdsley, Gary Griffin and Helen Shirk.

Harry O'Connor had an article published in the June issue of "Crafts Canada" entitled 'Micro-Sculpture'; he also had an article in the May issue of "Goldschmiede Zeitung-European Jeweler" which covered the use of quick setting polsufide rubber material for rapid duplication of surfaces for integration into jewelry forms. Harold has been invited to exhibit in the International Jewelry Arts Exhibition to be held in Tokyo, Japan in November 1976.

Pahanka is participating in "Jewelry—East Meets West" at Spirit of Earth gallery in New Hope, Pa., July 10-Aug. 24.

Al Paley received a NEA grant for his work in stainless steel. His iron gates have been installed at the Renwick Museum in D.C.

Arlene Fisch has returned to San Diego State U. and Fred Woell has taken her position at Boston University.

Ron Pearson participated in a show at the Etinne Gallery in Camden, Maine during June.

Tom Reardon has taken a position vacated by Robert Von Neuman at Urbana, Illinois.

Heikki Seppa participated in a one-man show at the Prarie House in Springfield, Ill.

SNAG members Jamie Bennett, Gary Griffin, Ed Higgins, Richard Mawdsley, Barry Merritt and Gary Noffke participated in the Bicentennial Bagatelle at the Fairtree Gallery in N.Y.

SNAG members David Keens, Stanley Lechtzin, Richard Mawdsley, Arline Fisch, Mary Lee Hu, Al Paley and Helen Shirk participated in "Jewelers USA" exhibit at the art gallery of California State University-Fullerton.

SNAG members Mary Lee Hu, Gene & Hiroko Pijanowski, Richard Mawdsley, Arlene Fisch and Eleanor Moty just had an exhibit at the Electrum Gallery in London, entitled "Six American Metalsmiths".

technical question

Response to former question "why add 50% 'new metal' to castings?"

The more scrap metal used in the melt, the more difficult it is to prevent the oxidation of the melt.—O'Connor

Response to former question "how do you prevent the health hazards that exist in metalsmithing?"

The health hazards which occur in a small shop are primarily those of fumes and dust. The basic way to avoid the toxic fumes is to make use of a fume hood with a good blower when possible. If not available, then do work requiring the use of toxic fumes outside with the wind blowing from your back. The dust problem in a small shop presents another problem: if you are polishing large pieces of work, then an adequate dust collector is needed to remove the dust from the polishing process. A problem which I have come across is in the polishing of small work (when the flexible shaft is used) and have not found a practical means to clear the area of dust around where I am working. However, a dust mask can be utilized, such as is used by painters and lapidarists. I would be interested to know of others who have solved this problem.

Concerning toxic fumes — I tend to shy away from materials which contain them as the necessary equipment for their safe use has not been available to date. Good common sense is needed generally in the use of toxic materials. Many of the materials which we are coming in contact with in the last few years have really not had enough testing to take them for granted.—O'Connor

question corner

1. Does anyone know of a text or source of information on making different kinds of chain links? (E.H.)
2. Does anyone know of a substitute for lining crucibles instead of asbestos paper? (H.O.)

Response to former question concerning safe working conditions in the studio.

Use good ventilation via a fume hood. Charcoal blocks and firebricks (the light-weight, porous kind used to insulate ceramic kilns) provide a good substitute for asbestos pads. (Harry O'Connor)

Response to former question concerning difficulty in rolling formulated gold alloys.

The gold alloys, tables for making alloys in *Procedures*

and Formulas for Metal Craftsmen should prove to be adequate in the rolling process. The difficulties in the rolling process may be due to several factors: not annealing enough, annealing too often, shape of the ingot not uniform, foreign material in the ingot, cook ingot, metal too cold, ingot too hot. The role of zinc in alloys such as white gold or casting golds, is generally because of casting properties. Zinc is generally not used in the production of golds which are used for fabrication work. It is also used in the production of low-fusing gold solders. Zinc is a more fusable metal and is used by silversmiths to impart more whiteness to an alloy of silver, copper and zinc. If zinc is used in the alloying process, it should be added to the melt after the other metals have been combined. A small trace of lead or tin in the melt will tend to make the ingot of gold unworkable and very brittle. (Harry O'Connor)

information

1. If you would like to join SNAG as a student member, simply send a check for $10 to SNAG, P.O. Box 247, University Station, Boston, Mass., 02215 (include the name of your school and date of expected graduation). If you would like to join SNAG as an associate member, simply send a check for $25 to SNAG at the address above. If you would like to join SNAG as a full member, you must send 20 slides of your work in a plastic file folio along with your professional resume. Send everything to Jim Meyer, 11713 S. Briarpatch, Midlothian, Va., 23113. Next due date is September 30. Full membership is juried and dues range from $50-$100, depending upon yearly salary.
2. The Visual Arts Program Guide for fiscal year 1977 is available from the National Endowment for the Arts, Washington, D.C., 20506. Upcoming deadlines include: October 1 for projects beginning in June 1977 in Craftsmen Apprenticeships (grant made to master and passed on to apprentice); Crafts Workshops (matching grants to tax-exempt professional workshop); and Crafts Exhibition Aid (matching grants to museums, universities, etc.). October 15 is the deadline for projects beginning in September 1977 that allow craftsmen to set aside time and/or purchase materials to advance their careers in amounts of $2,000-$10,000. For a complete list of deadlines, possibilities and details, write NEA.

publications

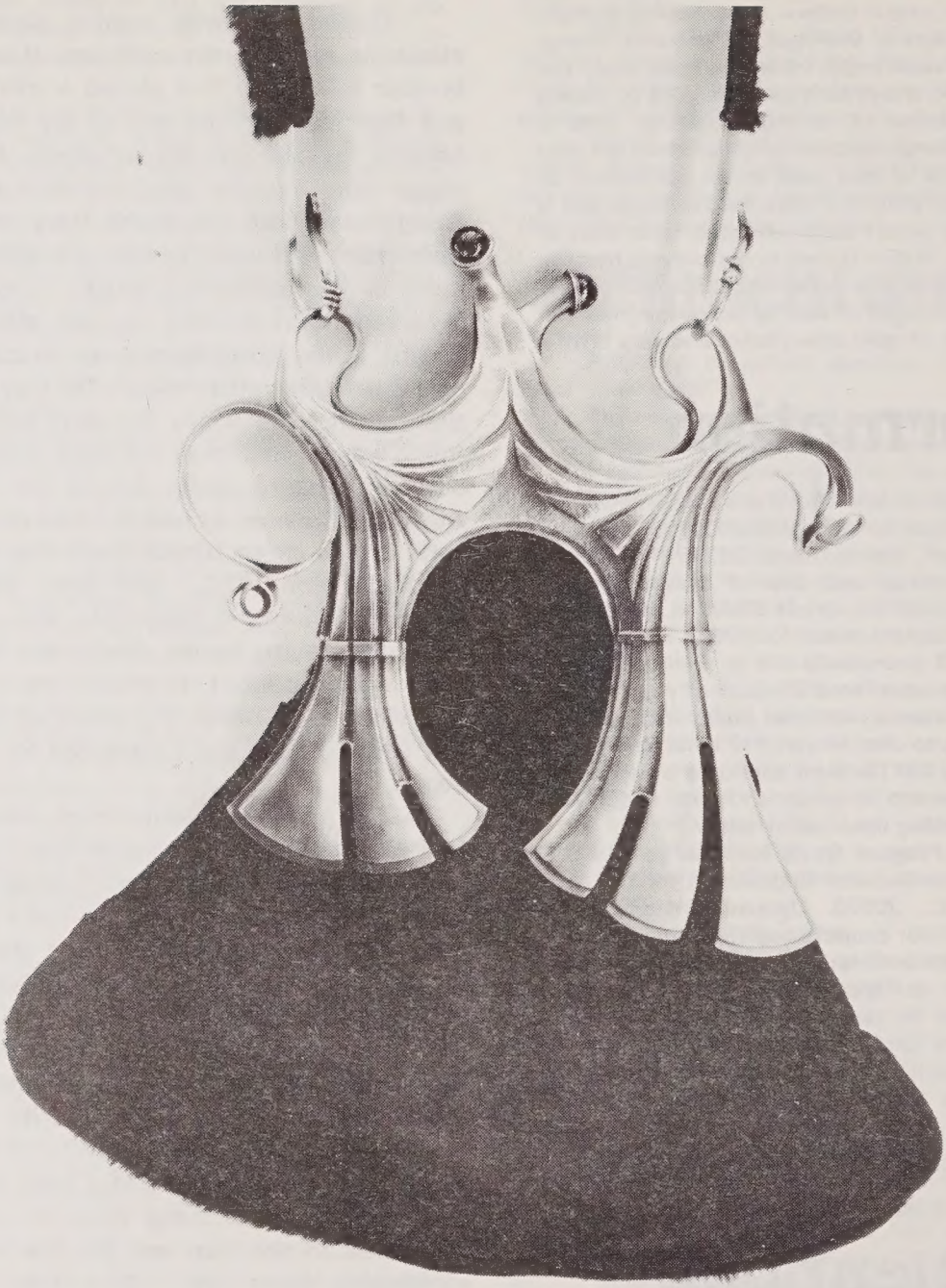
The Working Craftsman magazine for craftsmen, students, teachers, and shopowners. Tells how and where to sell through fairs, shops and galleries; where to find supplies, books, publications; reveals trends to cash in on; lists where and how to enter shows — 200 per issue; new products, styles, etc. Contributors include Philip Morton. Four issues per year, cost $9 for one year, $15 for 2 years, and $22 for three years. Write The Working Craftsman, P.O. Box 42, Northbrook, Ill., 60062.

MARCIA LEWIS

Involvement with making visual forms began attracting me at a very early age. It was actually my brother Mike who first placed a crayon in my hand and later dumped the rest of the box on my head because he had lost my attention. Formal training began early, but for what reason is still a mystery. Being from a Canadian-Jewish-Navy family, which for generations had never produced anyone capable of so much as whitewashing a fence, I appeared to spend joy-filled hours messing up pad after pad of "Big Chiefs" while riding from coast to coast in the back of a Plymouth station wagon. My Dad was amused by the drawings (especially the dirty ones), but Mother (mine was pressed from the same mold as 'Rhoda's') decided I should study. One of the first things she would do when we arrived at a new place would be to enroll me in an art achool. Beginning at the Corcoran in Washington, D.C., and then the Balboa and Cornado Schools in California, she spent Saturday mornings praying for me. And, when looking back on the junk I produced, it amazes me that the money still went for lessons! My suspicion is that she was just keeping Mike and I separated for a few hours of peace.

The junior and senior high school art instructors I was blessed with convinced me that all my mother's prayers had helped. I began college in San Diego as a sculpture student. It was a big school with progressive attitudes toward form and materials. My tendency to carve abstract, but recognizable, forms into avacado wood didn't meet with approval as it had earlier, so I looked elsewhere for direction. Metal completely captured me with its equally demanding and rewarding characteristics. Unlike clay or wood, one needs to have specific tools and information to manipulate the material and a great deal of time to devote to it. These things drew me into the lives of the others in the class and for the first time I was exchanging ideas and information. Helping first semester students began to humanize me and that was particularly beneficial. Never for one moment did I feel my metalwork was anything exceptional. It was something I could do for 18 hours a day and rise the next day for 18 hours more with the same enthusiasm and enjoyment. It was the placement in the 1969 Sterling Silversmiths Competition that signaled the decision to go to graduate school.

(con't.)



MARCIA LEWIS; shoulder bag, 2"x7½"x12" (excluding strap);
brass-silverplated and oxidized, unborn calf pelt, psilomalene stones.

Graduate school in Long Beach left me with a competent vocabulary technically. That, coupled with my earlier experiences, found me deeply involved, as I am today, with designing 3-dimensional forms for display on the human form. Teaching what I knew at this point was useless because I would have been a student teaching students, with no knowledge of alternatives.

A place as a goldsmith's apprentice was procured for me in Zurich. The day was long and filled with repairing, small gold fabrications, dealing with clients, keeping books and tolerating abuse from my employer. Nights were for my own work which suffered terrifically. This life was not for me! Later, working for Tony Laws (a London silversmith), proved more satisfactory from the worker's point of view, and merchandizing one's art can be a lifetime education which as a lesson well learned. It was in Copenhagen where I was working blissfully on a Marshall Fellowship that teaching took on a special meaning for me. The goldsmith whose studio I rented space in took on a few students. I could see what effect they had on her. Her metalwork was comparatively experimental and she immersed herself in it, but the students drew her out. I now rely on my students to do the same for me.

When my life as a metalsmith is in balance with my life as an educator of metalsmiths, it is beautiful indeed — but a constant struggle to maintain. It helps me to work in a limited series. The series of 3 Bags all utilize similar techniques and all take their forms from the parts of the body they adorn. My ornaments always look best on tall, skinny, flat-chested people which causes problems for galleries attempting to sell them for me. My earnings as a metalsmith are not mixed with my earnings as an educator and this keeps me from being entirely decadent in my approach. Still, the metal work appeals to my selfish nature and the teaching causes me to share it with others.

SNAG for me represents a vital assistance in maintaining the balance. It nourishes me and my students with ideas and information and provides contact with others of kindred feelings.

sources

Cherry Creek Ent. has a hand-pressed antique and tiffany jewel series. They are exact replicas of turn-of-the-century border jewels in strong cathedral colors, opals and streaky opals. Write Cherry Creek Ent., 2860 Walnut St., Denver, Colo., 80205. (large quantity discounts)

SPECIAL NOTE

SNAG has just received $1,750 from NEA for the presentation of 5 technical papers at the upcoming Seattle Conference. This money will be divided among 5 participants who are chosen to present their paper. Individuals desiring partial (or complete) financing to research and write a paper should IMMEDIATELY submit a letter of intent to Mary Lee Hu, c/o Art Dept., University of Wisconsin, Madison, Wisc., 53706. (Mary Lee will be in Wisconsin after Sept. 1.) The letter of intent should contain any relevant information such as subject area, intended research, and what form findings will be presented, etc. Graduate students are also encouraged to apply especially if they are doing a thesis. Deadline for applications shall be October 15, 1976.

sources

Free sample and price list for GRIP-IT, an excellent ring and bracelet display sent on request, by Raymond Gabriel, 1469 Rosena, Madison, Ohio, 44057. (importer of semi-precious stones)

METAL IN MEXICO
(World Crafts Council Conference)

The centerpiece of activities relating to metal was the day-long metal seminar on the topic "Human Imagery in Jewelry". Fritz Falk, Director of the Jewelry Museum in Pforzheim, Germany, spoke for the three morning hours on this subject throughout history. The topic was organized by commonality in theme rather than by date. Among the topics were the use of human form as god, as saints, as people of public interest, as poeple of private interest, as fantasy figures, as the image of the artist, in groups, in part (heads, eye, mouth, ear, hand) and masked. The flood of slides was interpreted in fluent English by Fritz who is a scholar/goldsmith having completed both the training of the goldsmith and degree of doctorate in art history. Fritz is a young man, a tireless talker and thinker, who continued to be an inspiration throughout the conference where more informal exchanges of information were possible.

The afternoon consisted of short presentations by an international panel of goldsmiths, followed by a question and comment period. The highlights from my own viewpoint are as follows.

Bruno Martinazzi is a philosopher whose human imagery is used to reflect the human condition in a very precise way. For example, the mouth is used as a motif because "through the mouth is expressed either truth or the contrary". A bracelet familiar to us, where one end of a clutch bracelet is a realistic finger and the other end a finger more abstract in form, expresses the idea that as intelligence developed in human history, man began to take with his fingers rather than grasp with his fist. A third object which I would like to describe is a ring: a simple band is topped by a rectangular rock into which is incised lines and numerals, rather

(con't.)

ruler-like, with the exception that the numbers are measures of time not space. His quest here was "to find what relation one can find with a measure of material, in this case 200 millions years old, and the image man created. Therefore the measures which man has created are shown. 28 is a very human measure ex. month."

The work of Bill Reid, a goldsmith from western Canada, features large jewelry works chased in high karat gold using Northwest Indian motifs, which are in fact part of his heritage. Though contemporary, Bill's work with the traditional motifs seems to concern the spirits represented by the human and animal forms. His presentation emphasized an aspect of human imagery in art throughout history in some cultures where the image actually carries the characteristics of the spirit of the image depicted.

Max Frolich showed a retrospective of his work plus a few examples by other craftsmen in Europe. These demonstrated his very personal and humanistic approach to life through his art. Since these works showed a return to the use of the figure in recent years, the topic of cycles in imagery was raised. Unfortunately, there was not enough time to explore the relation of the cycles to the individual artist or his culture.

Wolf Weinrich moved from the jewelry trade in Europe where the common ambition was "to build checkbooks into diamond cemetaries" to Australia where he has developed what must be the prime source of goldsmiths' training in higher education there. His own work is related to the approach which we associate with contemporary Germany. Titles such as "Computer I" and "Man in Space" define a general theme which in fact is full of very private imagery. Although he has stated a very pessimistic view on the probable outcome of today's problems, the works in these more abstract aspects are bright and uplifting.

Arline Fisch showed works by herself, her students and fellow craftsmen. One comment on the aspect of the grotesque in American jewelry provoked comments after the program which might be expanded at some time in the future.

My own research in human imagery in contemporary goldsmiths east of the Mississippi unearthed very few craftsmen who work exclusively with the human form. Among these are Stan and Judy Plotner, Tony Lent and Jacklyn Davidson. However, the startling fact is that few goldsmiths use the human form in proportion to the number of painters and sculptors in NYC who do so.

The seminar was organized by Arline and was remarkable for its success in attempting to treat a subject in great depth, an approach which the professional goldsmith found truly stimulating.

Other presentations included slide lectures by Tom Markusen (blacksmithing), Max Frolich (filagree work of Cortina, Italy), associates of William Spratling of Taxco and a group presentation organized by Irena Brynner which included the works of Debbie Aguado and Mary Lee Hu.

Max Frolich showed the filagree work and the tools for its manufacture from Cortina, Italy. His information was the result of thorough research stemming from seeing a single piece of such work quite unexpectedly while in Cortina on holiday. Evidently Cortina was a center for such work in the previous century and had a well-known school to train artisans in this craft. The examples of this work, many of which are now on public display in a museum in Cortina, are characterized by layers of forms, particularly flowers, made with twisted filagree wires so tightly twisted that the overall effect was not open and lacey. The tools depicted included a brass drawplate with drilled ruby center, jigs about which to bend the wires, the wooden taps and dies to press them into the desired shapes and a device to twist the wire which resembled an elementary spinning wheel in that the wires were twisted and wound up on the wheels; they were spun from two spools which rested on a wheeled carriage at such an angle that the force of gravity kept them taut.

Demonstrations occurred almost continuously by craftsmen from every part of the world. These were situated under tents located in areas near the central promenade. The Mexican craftsmen who caused much interest included a team of coppersmiths and a craftsman who specialized in silver inlaid in steel which was then given a bright blue patina. A filagree worker and a craftsman who specialized in casting represented Africa, and Bill Reid, Bruno Martinazzi and Max Frolich represented the western traditions by demonstrating techniques prominent in their own works.

The very full, planned program was matched in worth by the opportunities for informal exchange of information. In addition to the persons already mentioned, in attendance were Marci Zelmanoff, Tom Tomason, Bob Ebendorf, Orland Larsen, Mel Someroski, Mary Ann Scherr, Bill Neumann, Jean Delius and Trudy Jeremias, among others.

Glenda Arentzen
July 11, 1976

GUEST ARTIST FROM AUSTRALIA TO VISIT U.S.A. Fall 1976

Norman Creighton, Professor of Gold and Silversmithing from Melbourne State College, Carlton, Victoria, Australia, will be coming to the United States this fall. Mr. Creighton helped host the metals invitational 1976 Ad Exhibition shown in Australia at his college this past April and May. It was the first time a major metals show of this kind was exhibited in Australia and it was very well received.

Norman is very interested in talking and visiting as many gold and silversmiths as he can during his 4-6 week stay. He has written some letters to the metals people he knows about his visit, but he hopes to meet and see other teachers and metalsmiths too. If you are interested in meeting him or hosting his slide lecture (I am not sure of his fee) please feel free to write him and introduce yourself. At this time, I do not know his itinerary, but his visit is scheduled for early fall — so if you are interested, write him NOW!

nuggets

We deeply regret that Hero Kielman had trouble with his eyes while traveling in Spain. We hope that the problem is only temporary and that he will be able to continue with his work as soon as possible. Anyone wishing to send cards or letters may write Hero at 1829 Bickford Drive, Clarkson, Ontario, Canada, L5J2K2.

PLEASE NOTE!!

We are beginning to run out of helpful hints. We need more information for the Newsletter if we are to reach it potential. Therefore, please mail in more helpful hints, letters, responses, sources, questions, etc. If this is your Newsletter then it needs your support.—Mark Baldridge

letters

Dear Editor:

Recently I stopped in San Antonio to visit the Southwest Craft Center and met Pat Gavin who introduced me to the SNAG Newsletter. *It is a treasure.* I was looking to establish lines of communication between the group of studio-jewelers organizing in El Paso and others in the surrounding areas. Your Newsletter offers an opportunity to expand on the idea.

I am enclosing an associate member's fee and passing the copy around to others in El Paso.

A steering committee for an El Paso Silver and Goldsmith Guild (we are nameless as of this writing) was formed last month in an effort to bring vitally interested craftspersons together. The goals of the group are to stimulate and promote the work of each artist, to encourage shows and sales, to hold workshops occasionally inviting out-of-town craftspeople and to develop within this community an awareness of the unique qualities of handcrafted jewelry. We would like to hear from others who have organized or are organizing in hopes of sharing experiences and information.

Sincerely,
Armida Gonzalez
2201 Texas Ave.
El Paso, Texas, 79901

Dear Editor:

Congratulations on yet another useful and informative issue of the Newsletter. If anything can bridge distances it will be this kind of written communication. Craftsmen working in metal in North America need to know well in advance what is happening and where. Continue to publish lists of people willing to give workshops and lectures. First hand, practical information is essential. In my teaching, I stress the necessity for adapting information to personal skills, interests and available materials. Very little is entirely new. But, it is useful to be stimualted by how someone has coped with a technique in a new set of circumstances.

Canadians feel in the minority in SNAG, cut off from much professional contact and isolated by vast distances. Perhaps the Newsletter will help to reduce this. The Newsletter has stimulated this response and I hope to write something for you soon. I will also try to feed other items of interest to you and offer to take this on as a regular thing.

David Watkins (British Jeweler) Workshop: June 14-27, Mohawk College, 135 Fennel Ave., W., Hamelton, Ontario, L8N3T2. Contact Pam Norman. Works in plastic. His wife is Wendy Rornshow. He'll be giving a workshop in St. Paul, Minn. before this one; don't know details. Intersted in giving slide lectures in N.Y., Philadelphia, Washington areas in July. London address is 35 Leighton Rd., N W 5.

Most sincerely,
Orland Larson

Dear Editor:

. . .Glass really is called a metal by many, and I believe metal people should know how to work it for their jewelry. More than once in the past, people have indicated that they think some of my pieces are mere assemblages of beads and glass, because they just automatically assume that all beads and glass used in jewelry have been made somewhere far away and bought by a craftsman for inclusion in my jewelry. They will say, "Oh, where did you get those beads?". It is an understandable mistake. Having the little article in GOLDDUST is a giant step toward educating people to understand and use glass by forming it themselves for inclusion in their work.

When I read people's questions about equipment and supplies in GOLDDUST, I keep wondering if they have heard of The Manufacturing Jewelers and Silversmiths of America, Inc. This organization probably got my name from a show catalog a couple of years ago and sent me a copy of their buyers' guide. In February 1976, they held their first West Coast Exposition, which I attended. My reclusive lifestyle and academic one-of-a-kind jewelry experiences had not prepared me for what to expect. There were lectures and demonstrations and exhibits of supplies and equipment. I came home with pounds of brochures and literature and catalogs. I learned some things and my entire jewelry experience was enlarged and enriched. I watched an experienced professional finisher who can completely finish 35 cast rings in an hour. I listened to a lecture about the effects on people and environment of chemicals used in plating and learned about the newest *non-cyanide* techniques for gold plating. I watched a professional engraver work. His deftness and economy of motion with his articulate explanation of what he was doing made a demonstration I won't forget. I went from booth to booth, examining tools closely. Now I know more clearly than ever before which pliers to buy and which not to buy. I have never bought a finding in my life and never will. And, I didn't even buy any of the thousands of beads exhibited, because I make my own. But that huge exhibit of things any jeweler would like to know about was a great experience, one I would recommend especially to those who have not had any commercial manufacturing experience. Address of head-

(con't.)

quarters of Manufacturing Jewelers and Silversmiths of America, Inc. is 340 Howard Building, 155 Westminster St., Providence, R.I., 02903. I am glad they put my name on their mailing list. Probably there are other organizations similar to this one, though I have not heard of another.

Peace,
Jane Booth
889 First Ave.
Chula Vista, Calif., 92011

Dear Editor:

. . .In June we had slide-lectures here at San Jose State by London metalsmith David Watkins, who gave us a very personal point of view of his work as an independent artist. Also in June, Max Frohlich of Zurich spoke to us of his 50 years as a metalsmith and educator — a valuable contrast to Watkins.

Marci Lewis
Los Gatos, Calif.

TURNING THE CLOCK BACK

Historians have long accepted the notion that the Bronze Age began between 3500 and 3000 B.C. in the valley between the Tigris and Euphrates rivers in Mesopotamia. It was during this period that man is believed to have developed advanced writing techniques, built the first true cities and brought metallurgy to the stage necessary to produce bronze. Now there is evidence to suggest that a cultural flowering may have occurred earlier—and thousands of miles farther east. Archaeologists excavating sites at Ban Chiang, a small farming village in northeastern Thailand, have found sophisticated bronze artifacts dating back to about 3600 B.C.

Thai archaeologists knew as long ago as the early 60's that unusual and ancient pottery had been found in Ban Chiang. But it was not until 1968, when a visitor brought some of the shards to the University of Pennsylvania's University Museum for testing, that scientists began to take the site seriously. Two types of dating methods indicated that the pottery was fired around 3600 B.C. That discovery led to a long-term archaeological investigation of the area by an expedition headed by Pennsylvania Archaeologist Chester Gorman and Pisit Charoenwongsa (called Dr. Pisit), curator of the National Museum in Bangkok.

In the past two years, excavations around Ban Chiang have yielded 18 tons of artifacts, including sophisticated clay pottery. But the most remarkable finds are the bronze spearheads, anklets and bracelets that predate the Middle East's Bronze Age by 600 years and the Bronze Age in China by about 1,000 years. "To make bronze in 3600 B.C. means that these people had an understanding of metallurgy that seems to have been unparalleled in any other area of the world at that time," says Gorman.

Peaceful Life. While there is no evidence that the ancient inhabitants of Thailand built cities that could compare to those of Bronze Age Mesopotamia, their sophisticated implements suggest that they had a high standard of living. Artifacts unearthed at the dig show that the early settlers grew rice, raised animals such as pigs and chickens, and probably believed in an afterlife. The findings also suggest that Ban Chiang's residents lived a peaceful existence. The archaeologists found few weapons of war—and no arrow points in any of the 126 intact skeletons unearthed so far. —reprint from *Time*, May 31, 1976

new members

We would like to extend our heartiest congratulations to the following new FULL MEMBERS:

Robert Fisher, Drewry Hanes, Val Link, Laurie Spivak, Roger Tawa, Jo-An Smith, Vada Beetler

We would also like to welcome the following new ASSOCIATE MEMBERS:

Carol Leech, P.O. Box 66211, Houston, Texas, 77006; Gaye Landry, Brettuns Pond, Livermore, Me., 04253; Jon Olsen, 62 Rutherford Place, N.J., 07032; June Kershaw, 9 Liberty St., Sandwich, Ma., 02563; Sheena Thomas, 1412 Chautaugau Pkwy., Des Moines, Ia., 50314; Vincent Ferrini, 86 Brook St., Scituate, Ma., 02066; Anne Taussig 7567 Hoover Ave., St. Louis, Mo., 63117; Elsie Vezey, 16315 Waycreek, Houston, Texas, 77068; Aurum Studios Ltd., P.O. Box 164, Athens, Ga., 30601; Paul Bundarin, 117 Main St., Apt. 6, New Paltz, N.Y., 12561; Armida Gonzalez, 2201 Texas Ave., El Paso, Texas, 79901

late news

1. Jewelry exhibit "East Meets West" July 10-Aug. 24 at Spirit of Earth in New Hope, Pa. Approx. 25 jewelers.
2. Well established gallery in Vienna seeks the work of American craftspeople for exhibition in Oct. Send slides to Inge Asenbaum, Galerie Am Braben, Kunst des Zwanzigsten Jahrhundert, Vienna 1, Austria. (Craft Horizon)

aesthetic question

What makes one metalsmith's work better than another (amount of time, design, craftsmanship, talent, etc.)?

Members are encouraged to respond to the above question as well as suggest future aesthetic questions. Responses shall be published in subsequent issues.

Response to former aesthetic question "How political is the 'metal world?'. Is it who you know and what organizations that you belong to that make the critical difference in achieving a moderate level of success in metalsmithing; or is it simply the quality of your work?"

Simply the quality of your work??? You must be kidding. Like the whole of the art world today, metal is no exception; or, for that matter, it has to do with society in general. It's who you know that has a great deal as to one's success (whatever that is).

With the practicing craftsmen, there is the freedom to deal with only the client on a one-to-one basis and not much politics involved. The client wants something done, the craftsman makes it, the client is happy (hopefully) and the craftsman is paid for his work and in turn is happy. The longer one is around an area the better he is known and the more clients he has; therefore, he is successful.

With the teacher, it is a different ball game. He has to interact with students (who, in most cases, don't know what they want to learn), administrators, and some public. However, other things enter into the game. Many times he is put into the situation of deceiving his students as to the quality of work and pushing students in a certain direction to build up an ego. After a few years most teachers become worn out and the ideals they once had fall. In some cases, the quality of student work also falls.

To become 'successful' on the circuit in the American metal scene, it is necessary to graduate from a name school; this in turn perpetuates the former teacher, institution, and design approach.

After many travels throughout America, Canada, and Europe, it appears that the name shows are filled with teachers and hardly any practicing metal workers. This is a defense mechanism as many of the teachers look down on the practicing craftsman. If a craftsman is competent he will always have clients, but with teaching there is always the possibility that someone else will come along who is better in design, technically more proficient, or is doing the 'in thing' at the time. There are a number of leaders in this country and many followers who copy the trends and methods. These people become successful on the circuit, but lose in the personal development that should occur in the work of an artist.

One of the sad things today is that there are countless craftsmen doing excellent work in the country, but somehow people are not informed about them.

(cont.)

In theory 'one should be judged on the quality of one's work'; in reality, it's who one knows. (Harry O'Connor)

snag exhibit

Phoenix Art Museum – January-February 1977. This will be the next big exhibition of metal work in the USA. The show will feature both an invitational and competitive section. Director Ron Hickman is working closely with Arline Fisch in preparing all the details. Once the information is ready, it will be published in our Newsletter.

We are naturally excited about this exhibition as we hope it will be the best metals show of the year. Therefore, please plan now to present a NEW work and one of only the highest caliber. Often people complain of not knowing about an exhibition until it's too late. This time, because the Newsletter provides an excellent means of communication, you will have no excuse. We are announcing this now so each of you have sufficient time to plan ahead and present some exciting new forms and statements.

The work will be shown at the Phoenix Art Museum and also be featured during our next SNAG metal conference in Seattle, summer of 1977. Please mark this exhibition down on your calendar, begin thinking about it now and plan on attending the conference in Washington next summer, tentatively set for June 16,17, and 18.

corrections

Our apologies go to Marilyn Ravanal since we did not attribute a helpful hint last issue. (Editor)

positions

PURDUE UNIVERSITY, Head, Department of Creative Arts. Coordinate and administer 3-section department: Theatre, Music, Art and Design. Fifty full-time faculty; undergraduate and graduate programs. Qualifications: record of creative or scholarly achievement; breadth of interest in the arts; at or appointable as full professor. Begin on or before July 1, 1977. A/D November 15, 1976. Equal opportunity/equal access employer. Kingsley Wu, Chairman, Search Committee, Dept. of Creative Arts, Purdue University, W. Lafayette, Ind., 47907.

MOVING?

If you will be moving and would like to insure the continued arrival of the Newsletter, make sure you contact the Newsletter directly of your new address (with zip code) and date of move. Also, contact the Boston SNAG office.

SELECTIVE PLATING . . .
A NEW TOOL FOR THE METAL SCULPTOR

Marv Rubinstein
Metal Finishing Consultant, NYC

Most metal sculptors are familiar with electroplating, and many have had small figures or other ornamental pieces gold plated in a bath. However, how does one go about gold plating sculpture 19 feet high, weighing approximately 11 tons and permanently mounted on a stone base? This was the problem the U.S. Capitol Parks Department recently had when they wanted to restore and regild four equestrian statues at the Memorial Bridge Plaza in Washington. They came up with an answer known to few sculptors, namely selective or high speed brush plating.

Until recently, gilding of large metal structures could be done in two ways. The simplest and least expensive technique is "flame gilding". In this method, gold is mixed with mercury to form a liquid amalgam, which is painted or sprayed onto the surface to be gilded. Using a torch, the mercury is then evaporated, leaving behind an even film of gold. This is a time honored method, inexpensive in cost, but with one drawback. Most professional flame gilders die from mercury poisoning before reaching thirty. For this reason, flame gilding is illegal in the United States.

The second alternative, and historically the oldest, is "gold leafing". Thin (0.000003") leaves of high purity 23 K gold are hammered into place on a metal base, using a slight overlap in each leaf to provide continuity. Leafing provides excellent coverage, good corrosion and wear resistance, and a simple application technique. Unfortunately, the cost is so high it is prohibitive for most work.

An Alternative – Selective Plating

Now selective plating offers a third alternative for regilding large pieces of sculpture on-site, or for applying any other type of electroplating. Selective plating is an actual electrodeposition method involving the use of D.C. power to feed current through a chemical solution from which metal is plated.

The actual process looks like arc welding. A rectifier supplies current through two flexible cables, one of which (the cathode cable) is fastened to the work where an electrodeposit is desired. The anode cable is fastened to a tool called a stylus. Attached to the stylus is an anode, usually made of graphite. Standard shapes are round, flat, concave, and convex. Very tiny anodes are made of 90% platinum with 10% iridium to provide extra stiffness.

In use, anodes are wrapped with cotton batting or other absorbent materials, and are then dipped into special high speed solutions specifically designed for selective plating. (In some cases, solution is fed to the anode by a small pump.) The circuit is completed by swabbing or brushing the absorbent pad over the area where plating is desired. The soft absorbent swab around the anode serves as the plating bath. Excellent adhesion is obtainable at a rate of deposit which is incredibly rapid as compared to bath plating operations on small surfaces.

Selective plating equipment is not terribly expensive and is portable. The equipment consists of a special power pack, an assortment of working tools and stylii, extra replaceable anodes, a selection of solutions (including preparatory solutions), a group of accessory items, and full written instructions. Power supplies are similar to those used in bath plating, except that additional devices are attached for simplifying selective plating. These include a digital ampere-hour meter for thickness control, a reversing switch for stripping and activating, an instantaneous cut-out device to protect the operator and the work from short circuits.

At the heart of the system are the special high speed solutions which give adherent deposits at rates five to fifty times faster than standard bath electroplating solutions. It is this extremely high deposition rate which makes selective plating economical. Solutions are available for plating such metals as cadmium, chrome, copper, lead, nickel, tin and zinc, and special alloys such as black nickel or black iron. Precious metal solutions – gold, rhodium, and platinum – are included. Ancillary preparatory solutions for cleaning, activating and stripping are also available.

It is only recently that selective plating has started to find decorative applications, including use by several sculptors. Until now, most applications for this technique were industrial, e.g. building up worn or over-machined areas; filling-in scratches, nicks and damages; obtaining precision bearing fits; and similar applications. The system is widely used for on-site aircraft and marine maintenance, for repair of molds, rotogravure cylinders and the like, and for numerous electronic applications. This means that solutions were designed for metallurgical and mechanical characteristics rather than for luster and, consequently, selective deposits are only bright when plated in thin layers over previously polished surfaces. Most deposits are matte, but can be polished where brightness is required.

During the last year or so, there has been much interest by sculptors in selective plating, both for original work and for restoration. As a result, selective plating equipment was shown and demonstrated at the 7th National Sculpture Conference at the University of Kansas last April.

Metal Coloring over Selective Plating

Another advantage, selective plating can be used to obtain a wide variety of colors other than those of the plated metals themselves. Most sculptors are familiar with the numerous patinas possible over copper or bronze. However, very few are aware that chemical coloring, which has been used for thousands of years on bronze, can also be used over other metals. Over cadmium, for example, it is possible to get orange and yellow shades of almost infinite variety. An operator can cadmium plate a bronze statue, and then convert the normal whitish cadmium color to any one of a large number of distinctive shades through the use of chemical conversion.

Typical selective plating installations, including power pack, stylii, solutions, accessories and instructions, are available at prices ranging from $500 to $10,000. Special kits for use by artists and sculptors can be obtained in the price range of $500 to $2,500.

reprinted from: National Sculpture Review–Fall 1972

NEW – BOOK DEPARTMENT

Attention members . . . we are pleased to inform you of a new service now available to you all – a book department of the Society of North American Goldsmiths. Ms. Hannelore Gabriel will be the director of this program. Those of you who attended the Cleveland conference might remember her as she took orders there for the new German book "Neuer Schmuck". She did an outstanding job of handling the payments, paper work, etc. and felt this was an area where she could be of permanent service to SNAG and its members.

Hannelore did the initial work involved in setting up this entire program and enrolled us with the American Booksellers Assn. This, along with other sources of information Hannelore has available, will enable her to locate just about any book you might be interested in AND at a 20% discount to you. To place your request, please use the order form below, or a Xerox copy.

On behalf of the SNAG members, I would like to extend a most gracious thanks to Hannelore for making this service available to us.

Bob Ebendorf
President, SNAG

helpful hints

1. Information on casting flues: For tough gold, use 2 tablespoons of powdered charcoal, 2 tablespoons of salammoniac, blend together and use a pinch before casting. For bright silver ingots, blend 2 tablespoons of powdered charcoal with a pinch of ammonium chloride and use as above. (O'Connor)
2. A good refining flux for silver filings and turnings is 48 g. of fine white sand, 8 g. sodium carbonate, 4 g. of common salt, and 2 g. of potassium bisulphate. A good refining flux for gold scrap containing iron/steel is 10 g. potassium carbonate and 5 g. potassium nitrate. (O'Connor)
3. When breaking in a new crucible, one can line the crucible with a layer of powdered charcoal. I line crucibles with a liner of asbestos to save heat and get a quicker melt; also to make crucibles last longer. (O'Connor)

books

The Art of the Silversmith in Mexico 1519-1936, by Lawrence Anderson. Two volumes in one, 8½x11½, 460 pages, 183 plates, 1975. LC 73-81683, 15 BN, 0-87817-139-8. $75 plus $1 for postage, 10% discount to educators. Write Hacker Art Books Inc., 54 W. 57th St., N.Y. 10019.

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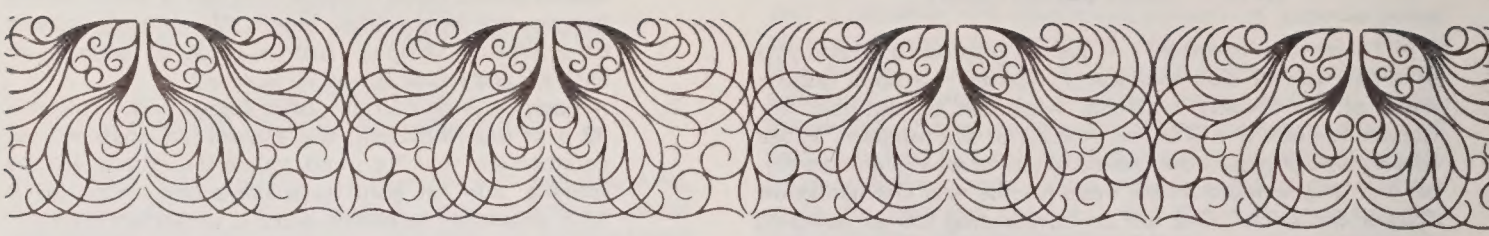

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